REPRODUCTIVE HEALTH NEEDS AND HEALTH CARE SERVICES AMONG RURAL SCHOOL GOING ADOLESCENT GIRLS

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I. Introduction

Adolescence is a period of transition where significant development begins with the onset of puberty involving a profound amount of change in all domains of development—biological, cognitive, psychosocial, and emotional. World Health Organization defines adolescence as the period in human growth and development that occurs after childhood and before adulthood, approximately from ages 10 to 19. This section of adolescents comprises 20.9 percent of the country's population in India.

Among adolescents, girls are more deprived of equal opportunities and are subject to neglect and inequality, and are represented as socially disadvantageous in our society (Kumari, 1995). Inequity between the sexes makes girls more susceptible to violence, sexual abuse and the practice of female genital mutilation and these gender inequalities pose a considerable hurdle for the future of girls. The probability of girls getting access to education and employment opportunities is lesser than that of boys. Their long-term financial prospectus is reduced still further by early motherhood. Gender-related hurdles such as restrictions on movement, lack of education or dropping out of school, early marriage and violence continue in creating unjust shortcomings for girls within this large group of adolescents in India (Nanda, Das, Singh, & Negi, 2013). In addition to this, contemporary development such as the decreased age of puberty, access to global media and changed cultural values of unmarried young people can expose them to harmful ideas and thoughts which may affect their reproductive and sexual life (Movahhed & Abbsi, 2006).

Reproductive health is an emerging issue among adolescent girls as they represent the collective and demographic future of a nation. Policy interests in 'adolescents' began to grow after ICPD (International Conference on Population and Development) held in Cairo in 1994, which states that adolescents have unique RH needs that are different from adults and also it calls for specific efforts by governments and civic society to understand and meet these needs. The largest adolescent population in India indicates the importance of precisely addressing the healthcare needs of this collective demography.

1. Research problem

An apparent trend of declining age at menarche, an increase in age at marriage, improved levels of education, change in cultural values brought about by rapid socio-economic changes such as globalization, urbanization, widespread availability and use of communication technology, high migration rates and decline in the prevalence of the extended family system can expose adolescents to ideas and thoughts which will impact on their sexual and reproductive life (Valizadeh, Taymoori, Yousefi, Rahimi, & Ghaderi, 2016). Adolescents are indulging in premarital sex more frequently at an early age, the incidence of pregnancies among them is rising and most of them face the risk of induced abortions under unsafe conditions and contracting sexually transmitted infections including HIV/AIDS (Joshi & Chauhan, 2011). Indian culture also makes it more difficult for adolescent girls to learn about sexuality and reproductive health issues and there is where these adolescents are posed to be vulnerable. When these adolescents are not given a scientific explanation of traditional practices and myths surrounding RH issues, they are left puzzled and are unable to distinguish between myth and reality. In the absence of systematic and correct information on matters related to RH, these adolescents will face a dilemma between traditional Indian norms and modern western influences (Capila, 2004).

The sternness of these problems is much more complex in rural areas because adolescent girls in rural areas are ignorant about the RH problems and their consequences. The low level of RH knowledge and less exposure makes them more prone to RH risks. The picture of ignorance and misunderstanding of the RH is worse among rural girls (Dube & Sharma, 2012). Even though adolescence is a time when looking after health and nutrition can help to build a defence against the heavy physical demands of the reproductive years, the attention given to the RH needs of adolescent girls is still meagre in rural areas. Most of the adolescent girls face inadequate and non-accessibility of health resources such as RH services which leads to their worst health condition. These adolescents lack the services that respond to their distinctive needs (Mehta, Kaur, Kumar, Chawla, Malik, & Khatrif, 2013). The main obstacles from the adolescents' perspective refraining them from getting RH services from health institutions were not thinking of the services, unnecessary of the services, lack of knowledge and being young/healthy (Abajobir & Seme, 2014). The services were inaccessible due to a lack of privacy, confidentiality, equipment and negative attitudes from service providers (Mbeba, Mkuye,

Magembe, Yotham, Mellah, & Mkuwa, 2012). The level of awareness regarding adolescent health care services has also an impact on the utilization of services.

The largest adolescent population in India indicates the importance of precisely addressing the healthcare needs of this considerable demography (Tripathi & Sekher, 2013). Furthermore, these adolescents have unique RH needs which must be tackled delicately. Even though the importance of understanding the health needs of adolescents has been appreciated in recent years; there are no large-scale community-based studies to assess the reproductive health needs of these adolescent girls in India and few attempts have been made particularly in rural setup to communicate with them for addressing their reproductive health needs or to assess the extent of utilization of health care services among these target groups. Thus, a limited number of studies about the reproductive health needs of adolescents in rural areas shows the importance of investigating these unique RH needs. Further reviews show that no efforts have been made to study the RH needs of rural adolescent girls in the Dakshina Kannada district. Thus, there is a pressing need to conduct research focusing on adolescent girls, especially in the rural areas since most will marry and begin families in their teen years and they pose a distinct array of reproductive and sexual health challenges. By keeping all these hindrances confronting in the promotion of adolescent reproductive health the present study has been undertaken in rural Dakshina Kannada district.

Considering the above, it was felt necessary to assess the RH knowledge, practices and to identify the reproductive health needs and services of adolescent girls in rural areas of Dakshina Kannada district.

2. Research questions

The primary question of this study is –What is the current level of reproductive health knowledge, practices, needs and services of rural school going adolescent girls of Dakshina Kannada district?

2.1 The specific research questions:

1. What is the current level of RH knowledge and RH practices of rural school going adolescent girls?
2. What are the RH needs and required RH services of rural school going adolescent girls in the D.K district?

3. What are the barriers to utilize RH care services by the rural school going adolescent girls?
4. Does the socio-economic factor influence adolescent's RH knowledge, practice, needs and services?

3. Aim and Objectives of the study

The main aim of the study is to explore the RH needs and the utilization of services among rural school going adolescent girls.

3.1 The specific objectives of the study:

1. To study the socio-demographic and economic profile of the respondents.
2. To assess the knowledge on reproductive health and health practices.
3. To identify the various sources of information accessed by the respondents about reproductive health.
4. To explore the reproductive health needs of rural school going adolescent girls.
5. To ascertain the extent of awareness and utilization of RH services by the study population.
6. To analyze the socio-economic factors influencing adolescents' RH knowledge, practice, needs and services.

II. Literature review

Studies indicate that various aspects of reproductive health knowledge are limited among adolescent girls and it is clear from the study conducted by Kamalam and Rajalaxmi (2005) which shows that about 37 percent of respondents had no knowledge of menstruation, and around 32 percent had high or moderate knowledge. Findings of the comparative study revealed that a large number of (60%) urban populations were aware of menstruation whereas the majority (56%) of the rural girls were not fully aware of its physiological issues. The information was often limited to the occurrence of bleeding every month after they reach a certain age (Behera, Sivakami, & Behera, 2015). The picture of ignorance and misunderstanding of the menstrual process is worse among rural girls (Dube & Sharma, 2012). There was a lack of information about menstrual issues especially with regards to cycle length, duration of menses and age at menarche among the adolescent girls (Dambhare, Wagh, & Dudhe, 2012).

Due to discomfort and lack of knowledge, adolescents avoid visiting health professionals for their problems related to menstruation and it is clear from the study that overall, 62.9% of the girls recognized the presence of gynecologic problems. However, the majority of the adolescent girls (87.4%) reported that they did not visit the health unit for any solution and a majority 91.3% of adolescent girls preferred a female doctor if they would have to visit the health unit (Reis et al., 2011). The health practices followed by adolescent girls during menstruation are also not found satisfactory by various studies (Kumar & Srivastava, 2011). Literature also reflects that effective health education intervention can bring about increase awareness among adolescent girls empowering them to care for their health as well as inducing them to prevent reproductive health problems (Phulambrikar, Kharde, Mahavarakar, Phalke, & Phalke, 2019); (Manjula, Kashinakunti, Geethalakshmi, & Sangam, 2012); (Bobhate & Shrivastava, 2011).

Through an international study, an effort was made to understand the reproductive health needs of adolescents to improve their health situation in particular and at the society as a whole. The three important RH needs identified among young adolescents are access to youth-friendly sexual and reproductive health services, comprehensive sexuality education and prevention of sexual violence, coercion and child marriage (Woog & Kagesten, 2017). Various adolescent reproductive health needs were reported in the qualitative study ranging from condoms, the need to have youthful counsellors who they thought would best listen to and understand their problems, medical centres and post-abortion care services and access to contraceptives as well as contraceptives education was expressed by the study participants. Further the results of the study resoundingly revealed that there was a strong need for the establishment of adolescent-friendly centres that would provide the much-needed SRH services (Atuyambe, et al., 2015).

Access to needed health services among adolescents is very essential for protecting the health of future generations and also helps in preventing adverse sexual and reproductive health outcomes (Woog, Singh, Browne, & Philbin, 2015). Adolescents lack the services that respond to their distinctive needs (Mehta, Kaur, Kumar, Chawla, Malik, & Khatrif, 2013). Availability, accessibility, acceptability and equity of health services are the different barriers that adolescents face in obtaining health services. Mukherjee (2013) identifies that several factors are responsible for the adolescents for non-availability of health care facilities in India. Lack of knowledge on the part of the adolescents, legal or cultural restrictions, physical or logistical restrictions, poor quality of

clinical services, unwelcoming services, high cost, cultural barriers, gender barriers, lack of confidentiality, being made to feel guilty, long waiting times in clinics are such reasons responsible for non-availability of services. A community-based cross-sectional study was undertaken in Ethiopia revealed that the main obstacles for refraining adolescents from getting RH services from health institutions were not thinking of the services, unnecessary of services, lack of knowledge and being young/healthy (Abajobir & Seme, 2014). Lack of information on SRH and socio-cultural norms and attitudes relating to adolescents' SRH in the community were key factors contributing to the utilization of SRH services by adolescents in Nepal. The study revealed that information was limited on SRH for adolescents in the communities and, therefore, adolescents were uninformed about seeking SRH services (Pandey, Seale, & Razee, 2019).

Among the Socio-economic and demographic factors sex, age, educational status living arrangement and economic status of the family were variables found to be significantly associated with RH knowledge. However, sex, age and education have been found to be significant social variables affecting RH service utilization. Adolescent girls are less likely to use RH services than male adolescents. RH service utilization was two times higher among late adolescents and in-school adolescents used RH services three times higher than their out-of-school counterparts. However, being from a rich family does not have any association with RH service utilization. Information, Education and Communication (IEC), adolescent-parent discussion about RH topics and RH knowledge are the factors associated with RH service utilization (Abajobir & Seme, 2014). A study carried out in Chandigarh has shown that the factors significantly associated with awareness of RH service were the age of adolescents, education of father, family income, geographical area and educational status of adolescents and the predictors observed to be significant for utilization of preventive services were the education of mother and school going status; for utilization of curative services was school going status; and for substance abuse were older adolescents and out-of-school status (Gupta, Bhatnagar, & Bahugana, 2015).

1. Overview of the literature review

The review of related literature highlights the major issues of adolescents' reproductive health worldwide and in India through the available research studies. A review of various studies presented in this chapter helped the researcher to understand the

adolescents' knowledge, attitude and practices regarding RH, sources of information accessed by them about reproductive health issues, the importance of reproductive health education, parental attitude towards reproductive health education and studies related to the utilization of RH services. A review of various studies presented in this chapter indicates that most of the studies on adolescent girls have focused on knowledge, attitude, practices of RH and utilization pattern of reproductive health services and few efforts have been made to study their reproductive health needs in India. A review of literature presented in this section also indicates that since the adolescents continue to remain at risk, the calling for the strengthening of need-based research is necessary to identify their RH needs which helps in understanding and meeting their needs and thereby help to create programs and services that address specific health needs of adolescents. Moreover, the review of existing literature found a dearth of studies on the reproductive health problems and services among adolescent girls of rural Dakshina Kannada district.

Based on this input the present study explicates the need of understanding the reproductive health needs and services of adolescent girls of Dakshina Kannada district by using mixed methods research design. Because the results and findings of the mixed research have a strong base for drawing justification and description, documentation and assessment of present programmes exclusively meant for adolescents and also addressing their reproductive health needs. Additionally, these methods enable the participants to freely express their views.

2. Theoretical framework

The theoretical framework is the philosophical base of any research. It forms the linkages between theoretical aspects and practical components of the investigation and has implications for any decision made in the research process. (Mertens, 1998). To understand the factors affecting comprehensive reproductive health needs and services, Social-Ecological Model (SEM) developed by Kenneth, McLeroy, and Bibeau et.al (1988) has been used in the present study. The SEM is more comprehensive in its coverage as it consists of factors from individual to the environment level and also includes the policies and laws that regulate healthy practices among adolescents. It helps to find the intertwined relationship between various levels (McLeroy, Bibeau, Allan, & Glanz, 1988). The present model addresses the complexities and interdependence between the environments, policies incorporating social and psychological influence on

the behaviour. Similarly, the flexibility of the model also helps to find the higher-level factors.

Thus, the present study which attempts to explore the RH needs and services which are mainly determined by RH knowledge the model designed by McLeory is best suited which includes five-level factors that influence health-seeking behaviour of adolescents namely the individual factors, interpersonal factors, institutional and organizational factors, the community factor and the public policies. The five-level factors are described as below:

I. **The Individual Factors**: Individual characteristics like individual knowledge, attitude, perception, education and marital status that influence health-seeking behaviour are included in this level.

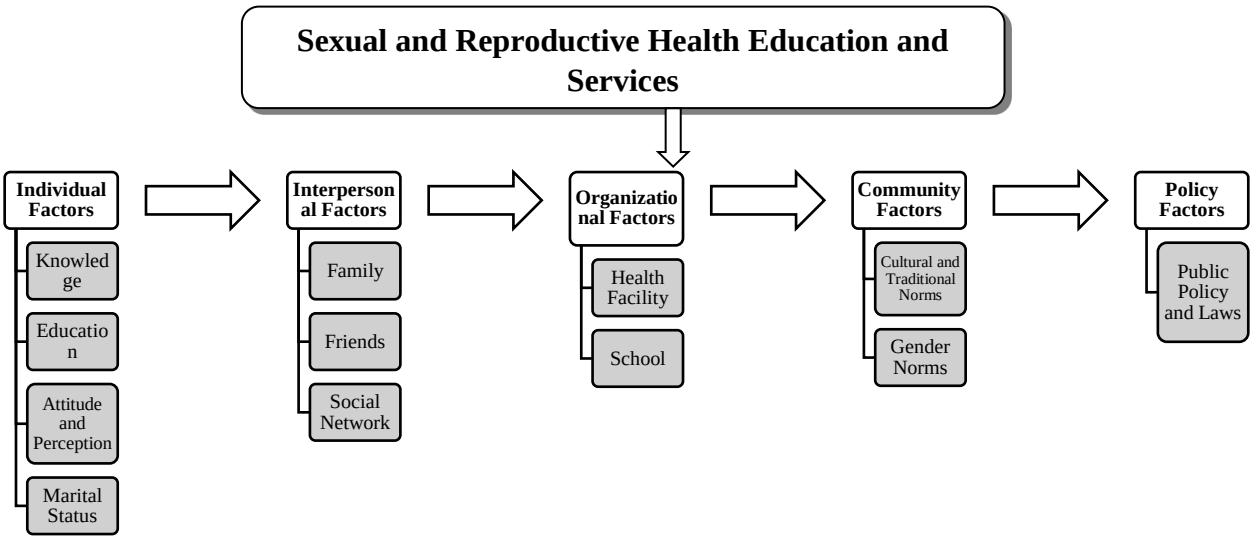
II. **The Interpersonal Factors**: Formal and informal social groups like family, friends, peers and social networks which provide support are included in this level.

III. **The Institutional and organizational Factors**: This factor includes rules, regulation, policies and structure of community organizations like health facility systems and schools which constrains or promotes the behaviour of adolescents in terms of accessing SRH services.

IV. **The Community Factors**: The informal networks like community, cultural, gender norms and traditions on SRH which influence the access to services are included in this level.

V. **The Public Policies**: National laws and policies that regulate or support the healthy practices of SRH among adolescents are included in this level (McLeroy, Bibeau, Allan, & Glanz, 1988).

Figure 1: Factors affecting comprehensive sexual and reproductive health education and services



3. Hypotheses

Hypotheses are the assumptions of the study and these hypothesis helps the researcher to understand the factors affecting comprehensive reproductive health needs and services of rural school going adolescent girls.

H-1: As the level of RH knowledge increases the RH practices of rural adolescent girls also increases.

H-2: As the knowledge of RH increases, the RH status of rural adolescent girls also increases.

H-3: RH knowledge has an impact on the RH needs explored by the rural adolescent girls.

H-4: Higher the awareness of RH services better will be the utilization of RH services.

III. Research Methodology

1. Research Design

A mixed-method design was adopted in the present study including both quantitative and qualitative components to explore the reproductive health needs, services and to study the extent of utilization of such services among rural school going adolescent girls. The researcher has made use of triangulation convergence design which is a very well-known approach of combining quantitative and qualitative methodology to best understand the particular study issues (Creswell & Plano Clark, 2007). The survey results and findings of Focus Group Discussions (FGDs) are compared and contrasted during the interpretation to validate, confirm and corroborate quantitative results with qualitative findings.

2. Universe and study area

The selected universe for the study was the rural school going adolescent girls and the geographical area was limited to the Dakshina Kannada district of Karnataka state.

3. Sources of data collection

The necessary data for the current study has been collected from both primary and secondary sources. For primary data, both quantitative and qualitative data has been collected from the respondents. Secondary sources were collected through census data, web-based materials, newspapers, books, journals, scientific research papers published reports by UN, WHO, Government officials, etc.

4. Quantitative data

4.1 Determination of sample size

A commonly used formula was adopted in the present study for the determination of sample size by fixing the tolerate error in the estimate of the population mean.

The sample size is given by;

$$n= c^2/e^2$$

Where '**c'** refers to the population coefficient of variation (c.v) of the study variable

'**e'** refers to relative standard error and is given by;

$e = pd/z_{\alpha}/2$

When pd =0.05, confidence level $(1- \alpha) = 0.95$.

From the table of area under normal distribution between $z_{\alpha}/2 = 1.96$.

$n = c^2/e^2$

$= (0.1)^2/ (pd/z_{\alpha}/2)$

$= (0.1)^2/ (0.05/1.96)^2$

$=0.01/ (0.0255)^2$

$=15.36$

The following table gives the sample sizes for various values of c.v.- when 100 X pd is 5% and confidence level is $(1- \alpha) = 0.95$.

Table 1: Sample sizes for various values of coefficient of variation

c.v	**N**	**Approximate**
0.1	15.36	15
0.3	138.29	138
0.5	384.16	384
0.6	**553.63**	**554**
0.7	752.95	753
0.9	1244.47	1244
1	1536.6	1537

Source: (Murthy, 1977)

From the above table it is clear that the sample size required is 384 for c.v= 0.5 and is 753 for c.v= 0.7. Taking into account the cost and time constraint, the researcher has selected a minimum sample of size n= 554 corresponding to c.v= 0.6 which is moderately large. Therefore, the required sample size for the present study was 554.

To determine the sample size the researcher has made use of the list of schools approved by the office of the Deputy Director of Public Instruction (DDPI). The researcher has selected 60 schools and from each selected school ten students from each of ninth and tenth standards were selected for the study. To account for possible attrition, the number of respondents has been increased to 600.

4.2 Sampling method and procedure

In the present study, researcher has used the probability sampling method to draw the required number of samples. By using a doubly stratified two-stage cluster random sampling technique, a good representation of the population is selected for the study. In this sampling, the two types of strata were considered. Blocks constitute the first strata and the types of school constitute the second type of strata. In this double stratification there are 7*3=21 strata. From each strata, the schools constitute the first stage sampling unit and the students within the school constitute the second stage. Within each block, the required numbers of schools are selected by using probability proportionate to size. For this purpose, the schools are arranged in order of the number of students in the schools by fixing sampling interval; say K. the first school is selected by selecting a number from 1 to K by the lottery method. In this study, the sampling intervals differs from block to block; this number is given by

$$\frac{\text{The number of schools in the block}}{\text{Number of schools to be selected in the sample}}$$

From each selected school, the researcher selected ten students from each of the ninth and tenth standards by using systematic sampling method technique based on the comprehensive source list of all the students studying in ninth and tenth standards. The justification for confining to the students of class IX and X is because the prevalence of sexual health problems is high in this age group as compared to the early adolescent period. So if this group of girls has more problems so they are more likely in need of the services and have high chances of facing more barriers while accessing it. The second reason for selecting this age group is they are matured and confident enough to understand the reproductive health issues and as it is a sensitive subject, they are able to and do not hesitate to answer the required questions.

4.3 Tools of data collection

Self-administered questionnaires were developed to collect quantitative data after reviewing relevant studies, WHO monographs on adolescent health and in consultation with subject experts. A self-administered inventory comprising both multiple-choice and descriptive questions related to the various aspects of RH, RH knowledge, RH practices, RH needs and RH services. An observation toolkit was also used by the researcher to highlight the major observations in schools. Questions and concerns from the students regarding the topic were answered after the survey by the researcher.

4.4 Data analysis

Collected data were processed and analyzed by using the statistical package for the social sciences 20.0 (SPSS) programme. Data were described in frequencies, means, percentages and standard deviations. The chi-square test was used; hypotheses were tested by Karl Pearson co-relation co-efficient to ascertain the relationship between dependent and independent variables. Appropriate tables with diagrams with univariate, bivariate and multivariate according to the needs were prepared.

5. Qualitative data

5.1 Sampling technique

The researcher has used the non-probability purposive sampling technique to collect qualitative data from the respondents. From seven educational blocks, seven schools were randomly selected to conduct FGDs. To explore the health needs and utilization of services, a qualitative study was conducted using FGDs among the adolescent girls in government, aided and unaided schools. Each of FGDs had around 7-10 participants. They were briefed about the purpose of the study and those who agreed to participate in the study were included to get in-depth information about the phenomenon.

5.2 Tools of data collection

The researcher selected an informal setting in the school to conduct FGDs with the help of a pre-prepared FGD toolkit consisting of largely open-ended questions. Participants were asked about their RH problems, needs and desires regarding RH issues including RH services.

During data analysis and interpretation, qualitative data was used to substantiate and corroborate quantitative data. The survey results and Focus Group Discussions (FGD) were compared and contrasted during the interpretation to validate, confirm and corroborate quantitative results with qualitative findings and the data were systematically analyzed in a descriptive manner.

6. Chapter scheme

The present study consists of the following five chapters and the content of chapters are briefed as follows:

The present study will consist of five chapters: **The first chapter** provides an introduction of the study which discuss the subject background of the study. **The second chapter** includes a detailed review of literature that is relevant to the study. This chapter helps the researcher in identifying trends in studies, both in western and Indian literature relating to previous studies and to identify the gap. **The third chapter** outlines the research design and details the methodology followed for the study. **The fourth chapter** presents the results and discussion. **The fifth chapter** includes a summary, recommendations and conclusion of the study. The conclusion and the suggestions were drawn based on the findings of the study.

IV. Summary, Recommendations and Conclusion

The study brings forth findings based on the various objectives of the study.

1. Major findings of the study

1.1 Social and demographic characteristics of the sample population

- The overall age of the respondents varied between 13-16 years and the mean age of the respondent is 14.35.
- Out of the total population, the majority 395 (65.8%) of the respondents were Hindus and more than half of (58.3%) respondents belong to BPL families.
- Less than half of parents i.e., 249 (44.6%) and 285 (47.5%) have attained primary education and 178 (32.9%) and 167 (27.9%) have up to high school education.
- Among 549 fathers of the respondents, majority 211 (37.4%) were daily wage earners, and among 597 mothers of the respondents; the majority of 288 (48.0%) mothers were homemakers.

- Television is a leading mass media (83.2%) for accessibility followed by a newspaper (52.8%), radio (44.8%), magazines (32.0%). It can also be noted that 2.7% of the respondents do not have access to any of the mass media.

1.2 Knowledge regarding RH among the sample population

- Majority percent of students were aware on the physiological changes that occur during adolescence like rapid gain in height and weight (79.8%), growth of hair in underarms, growth of hair in pubic parts (82.7%), white discharge from the vagina (77.2%), development of breasts (67.2%), increased size of uterus, vagina, labia and clitoris (47.8%) and onset of menstrual period (72.8%).

- The data reveals that most of the respondents were not able to identify the female reproductive organs like ovaries (91.7%), fallopian tube (97.3%), uterus (94.7%) and vagina (87.7%) respectively.
- The awareness level of the respondents on the reproductive system is so low that among a vast majority of the respondents 81.5% have scored a zero out of five which means they were unable to identify any of the organs in the female reproductive system correctly and none of the respondents could score a five.

- It is visible from the study that 43.5% of the respondents had their first menses at the age of thirteen, for 30.5% menarche started at the age of twelve and the calculated mean age of menarche is 12.77.
- Majority of the respondents (85.2%) have an understanding regarding menstruation before its onset and less than half 45.0% of the respondents opined that they came to know about menstruation from their mothers and they were considered most approachable for obtaining the knowledge on the menstrual period before the onset of menstruation.
- During the first menstruation about 40.2% of the respondents were scared and 24.8% of the respondents felt discomfort.
- Majority 89.5% of the respondents perceive menstruation as a physiologic process and a percentage of 32.8% respondents described that menstrual bleeding is the result of uterus shedding its line and 6.5% denies the stated reason and the remaining 60.7% were not aware of that reason. It is visible in the study that of

600 respondents 53.4% people responded that the menstrual cycle will occur on every 25 to 28 days.

- Only 46.3% of the respondents have given a correct answer to the question on the cause of HIV/AIDS, around 33.7% said that it is possible to cure HIV/AIDS. 26.7% are of the opinion that HIV spreads only among drug users, and sex workers which are false notions.
- Study depicts that a significant number of respondents were either not aware, or had wrong information on the means of spread of HIV/AIDS.
- The percentage of not aware about the prevention methods for HIV was less than fifty percent.
- Study also showcases that 46.5% of the respondents have given the correct answer regarding the transmission of HIV/AIDS and more than half of the population is either not aware of the prevention methods for HIV/AIDS or had given wrong answers to the questions regarding prevention methods of HIV/AIDS.
- Out of 600 respondents, the majority of 90.5% do not have any awareness regarding STDs and the remaining 9.5% of the respondents have a basic understanding of sexually transmitted diseases.
- A vast majority of 82.0% of the respondents were not aware of any family planning methods. It was seen that 8.8% of the respondents were aware of female sterilization as a method for family planning however they were not able to name either the male or the female sterilization.
- Study depicts that majority 66.0% of the respondents have moderate knowledge regarding RH; 23.8% of the respondents have poor knowledge and 10.2% of the respondents have good knowledge regarding RH. The mean and standard deviation was 10.00 ± 3.432.

- Study analysis shows that age ($p=.000<0.01$), class ($p=.000<0.01$), mother's education ($p=.000<0.01$) and accessibility to number of mass media ($p=.012<0.05$) have shown significant association with RH knowledge.

1.3 Reproductive health practices among the sample population

- Around 44.3% of the respondents responded that their menstrual bleeding duration will be for five days followed by 43.8% who stated that their menstrual bleeding lasts for seven days.

- It is observed that 55.8% of the respondents use sanitary pads and 38.8% use both reusable cloths and sanitary pads and out of total 600 respondents only 265 people use cloth for menstrual management.
- Out of 568 respondents, around 46.5% of the respondents use two pads in a day and 33.6% use three pads in a day.
- The disposal pattern of menstrual pads revealed that out of 568 respondents, more than half of 52.8% of the respondents flush their used menstrual pads in the toilet. 41.9% of the respondents said that they burn their used menstrual pads.
- It is very clear from the study that more than half that is 57.2% of the respondents change their pads at school only sometimes and 28.5% never change their pads at school.
- Girls cited several reasons for the non-use of toilets for changing absorbent materials, including lack of practice, dirty facilities and a lack of appropriate means for managing disposal.
- Out of 600 respondents most 91.8% feel that the pads are comfortable to use, 86.5% says that it absorbs the adequate amount of menstrual blood. 86.2% feels that it keeps the clothes clean.
- A majority of 74.8% of the respondents take baths twice a day during menstruation and nearly 42.5% of the respondents follow unique food practices during the days of menstruation.
- The study presents that only 20.0% of the respondents never felt an impact of menstruation in their daily life whereas a large majority of 80.0% had very often or sometimes had an impact of menstruation in their daily routine.

- The present study reveals that the majority of the respondents follow restrictions during menstruation. 86.5% of adolescent girls opined they were not allowed to go to religious places which is the major restriction found in the present study followed by not being allowed to touch the trees 42.2%. The overall restrictions were seen to the amount of 90.2% of the total respondents.

- It was seen that less than half of the respondents i.e., 44.3% followed one or the other form of ceremony during menarche. However, more than sixty percent (62.3%) of the Hindu respondents followed a ceremony during menarche.

Majority of girls practice 'Kalasa Snana' ritual during their menarche, which is a ritual followed in most of the Hindu families in Dakshina Kannada.

- During FGD majority of the girls from the Sullia educational block mentioned that they have undergone a ceremony called 'Ruthumaduve', during their menarche. It is a ceremony where close relatives and neighbouring women along with the mother of the girl offer ritual bath, aarathi and special food made of fenugreek and jaggery to the girl on the fifth day of wished menarche. The girl is whished by her relatives which is followed by lunch.

- The study also indicates that 17.7% of the respondents had availed RH services for the treatment of menstrual problems and this reason stood the highest out of all other reasons, followed by urinal problem at 13.7%.

- Study depicts that majority 50.3% of the respondents have poor RH practices, and remaining 49.7% of the respondents have moderate RH practices. The mean and standard deviation was 6.57 ± 2.029.

- Study analysis shows that age ($p=0.582>0.05$), class ($p=0.142>0.05$), ordinal position ($p=0.549>0.05$), mother's education ($p=0.757>0.05$), economic status ($p=0.235>0.05$) and accessibility to number of mass media ($p=0.792>0.05$) have shown no significant association with RH practices of the respondents.

1.4 Present RH status

- The study shows that a majority of the respondents (91.3%) most often faced problems during menstruation. It is seen that about 59.9% out of 548 respondents experienced cramps or painful menstruation.
- It can be observed that majority of the study population most often experience physical problem during menstruation like pain in lower abdomen (50.3%); headache (42.2%); irritation (68.2%); loss of appetite (40.3%); cramps (45.8%); stomach ache (74.8%); nausea (26.7%); back ache (39.0%) and body pain (45.3%).
- It is seen from the study that 479 (79.8%) of the respondents take remedial action for their menstrual problems whereas 121 (20.2%) of them do not take any remedial measures for their menstrual problem. During FGD one respondent opined that my mother prepares bitter kashaya (herbal medicine) made of jeera

(cumin) with water in a special vessel when I get severe stomach ache during menstruation.

- Study depicts that the majority 89.7% of the respondents have moderate RH status; 6.8% of the respondents have good RH status and the remaining 3.5% of the respondents have poor RH status. The mean and standard deviation was 9.75 $\pm$ 1.840.

1.5 Sources of information accessed by the respondents about RH

- Mothers were considered most approachable for obtaining the knowledge on the menstrual period before the onset of menstruation by 45.0% of the respondents. 27.2% of the respondents came to know about menstruation from Kishori training programmes.
- Study presents that a majority of the respondents i.e., 90.7% expressed that they have attended the talks on sexual and reproductive health in their schools. A higher percentage of non-attendance to this programme was seen in the unaided schools at 18.0%.
- Issues such as menstrual hygiene, management of menstrual problems, and diet during menstruation seems to be discussed the most during RH talks in schools and are comprised in the category of 'More than 80%'. Issues such as the place for HIV tests, Female reproductive system are comprised in the category of '60% – 80%'.
- The study reveals that a majority of the respondents i.e., 65.0% prefer to get information on reproductive health from the school counsellors.
- It can be observed that a majority of 73.2% of the respondents discuss RH related matters with their parents especially the matters related to menstruation.
- It is clear from the study that more than half of the respondent's (59.5%) parents encourage to discuss reproductive health issues. Around 30.8% of mothers feel embarrassed while imparting sex education to their daughters.

1.6 Awareness and utilization of RH services among adolescent girls

- A high percentage of 84.5% of the respondents had not heard about the Sneha clinic. Only 8.5% of the respondents opined Sneha clinic provides services to adolescents.
- Around 54.3% of respondents were not aware of adolescent-friendly services available for adolescents and 45.7% of respondent's opined Meena club, IFA tablet, availability of Shuchi pad and Kishori training were the services available for adolescent girls.
- It is very clear from the study that 36.50% of respondents attended Kishori training programmes conducted in the school, 38.50% of respondents utilized Shuchi sanitary napkins provided by their respective schools and 72.80% of the respondents were taken IFA tablet provided in their school by the health department. Lack of awareness refrain adolescents from getting available RH services. Thus, advocating and increasing awareness about AFHS is very crucial to the success of any adolescent reproductive health programme.
- A large percentage of subjects (99.2%) indicated having not visited any adolescent-friendly health clinics. Thus accessing adolescent sexual and reproductive health services seem to pose a greater challenge for adolescents in rural areas.
- Highest majority of 84.5% of the respondents were unaware of RH services prevailing in the community. This means awareness is a major hindrance to utilizing such services.
- Study results can be analyzed that majority 50.5% of the respondents were not aware of RH services and 49.5% of respondents were aware of the services. Mean and standard deviation was .63 $\pm$ .712.

- Study unveils that the majority 66.0% of the respondents' utilization level is poor and 34.0% of respondents' utilization level is moderate. The mean and standard deviation was 1.28 $\pm$ .915.

- Study analysis shows that ordinal position ($p=.000<0.05$), mother's education ($p=.000<0.01$) and economic status ($p=.000<0.01$) have shown significant association with awareness of RH services.

- Study analysis also shows that ordinal position (p=.000<0.05), mother's education (p=.000<0.01) and economic status (p=.000<0.01) have shown significant association with utilization of RH services.

1.7 Reproductive health needs explored by the respondents

- It is clear from the data that a vast majority of 85.2% respondents expressed they are not getting adequate information regarding reproductive health issues and the respondents were also asked if they needed more information about reproductive health, majority of 91.5% of the respondents expressed that they needed more information on reproductive health.

- During FGD, most adolescent girls expressed that they are in very much need of RH information.

- Out of 600 respondents, a majority i.e.77.8% desire for additional health services. The additional services they would like to avail are: A lady doctor at every hospital for comfortable services at the rate of 15.8%. 11.1% of the respondents feel there should be counselling centres in their neighbourhood. 10.1% of the respondents desire to have adolescent-friendly Sneha clinics in their vicinity.

- Out of 600 respondents, 99.3% replied affirmatively to the question on the importance of imparting RH education at school and the remaining .7% of the respondents replied adversely. 45.5% of the respondents opined that RH education is required to clarify the queries related to RH.

- During FGD girls opined that it is very important to impart RH education in schools because it is easier for them to clarify their doubts regarding RH and related issues in the school than at the home. They opine that teacher or subject expert will be the best person to impart knowledge effectively and also, they will not hesitate to answer the questions related to RH issues.

- Out of 600 respondents, 96.7% of them cited menstruation as a very important topic to be discussed during the RH education sessions and 92.0% of the respondents cited RH issues as important topics to be discussed during these sessions.

- Majority of 73.8% of the respondents mentioned school as the most convenient location to discuss sexual and reproductive health issues among the adolescents followed by home at 26.2%.
- It was seen that the highest percentage of first preference was given to counselling method for knowledge delivery about RH issues followed by interactive educational activities and the last by lecture method.
- Majority 66.3% of them opined that school counsellors will be the responsible person to teach RH education at school followed by a school teacher (54.8%).
- It is obvious from the study that the majority 95.0% of the schools do not have school counsellors. It is also seen in the table that a large proportion of the respondents i.e. 87.2% opined that they need a counsellor or a mentor in their schools.
- A vast majority i.e., 90.0% of the respondents are of the opinion that parents should communicate to them regarding reproductive health issues.
- During FGD the majority of girls opine that it is very necessary that mother needs to communicate with their daughters regarding such issues which will help the youngsters to face problems.
- Around 40.2% of the respondents agreed to the statement that "RH education will give adolescents the idea to involve in sex earlier, 44.3% of the respondents disagreed with the statement that reproductive education should only be taught at home.
- It was seen that 94.3% of the respondents agreed to the statement that government should adopt RH education and Life-skills programmes to reduce the risk-taking behaviour of adolescents.
- A vast majority 80.3% of the respondents agreed that government should provide universal access to contraceptive information and services as well as pre/post-natal care irrespective of marital status.
- A vast majority of 96.5% of the respondents agree to the statement that government should have an obligation to undertake strong measures to protect adolescents from sexual violence with harsh penalties for offenders and the majority 95.5% of the total respondents agree with the statement that

government should stress the need for counselling and medical services for adolescents.

- Study can be analyzed that majority 98.8% of the respondents have been able to identify moderate RH needs,1.2% of respondents have identified less RH needs and none of the respondents recognized high RH needs. The mean and standard deviation was 8.04 $\pm$ 1.289.

- Study analysis shows that age ($p=0.151>0.05$), class ($p=0.254>0.05$), ordinal position ($p=0.656>0.05$), mother's education ($p=0.435>0.05$), economic status ($p=0.403>0.05$) and accessibility to number of mass media ($p=0.717>0.05$) have shown no significant association with RH needs explored by the respondents.

- Pearson correlation result shows that there is a significant positive correlation between RH knowledge and RH practices with $r=0.512$, $p= 0.006< 0.01$. However, the overall result defines that as the RH knowledge increases, the RH practice also increases.
- Study result also shows that there is a significant positive correlation between RH knowledge and RH status with $r=0.659$, $p= 0.000< 0.01$. However, the overall result describes that as the RH knowledge increases, the RH status also increases.
- Study result also shows that there is a significant positive correlation between RH knowledge and RH needs with $r=0.428$, $p= 0.002< 0.01$. However, the overall result states that as the RH knowledge increases, the ability to explore the RH needs also increases.
- Study results also show that there is a significant positive correlation between awareness of RH services and utilization of RH services with $r=0.614$, $p= 0.000< 0.01$. However, the overall result confirms that as the awareness regarding RHS increases, the utilization also increases.

2. Implications and recommendations

The implications and recommendations that follow are thought upon through the results of the present study.

- The vulnerable condition of a huge segment of the adolescent population in India points towards an urgent need of enhancing school enrolment, raising the age at

marriage and first birth so that they can deal with the challenges of life in a more effective way. This requires combined efforts of social workers working in the field of adolescents and all the stakeholders working for the empowerment of adolescent girls.

- Social workers in collaboration with Government and NGOs have an important role in providing necessary interventions concerning RH of adolescent girls including menstruation, hygiene, early marriage leading to teenage pregnancy and vulnerability to sexually transmitted diseases, sexual exploitation, and abuse.

- An important and urgent need explored by the majority of respondents in the present study is an initiative of age-appropriate RH education at different stages of adolescence in all types of schools (government, aided and unaided) which is also an inevitable call to clarify questions and queries arising in adolescents and to bridge the knowledge gap among them. Social workers along with Government, NGOs and other stakeholders need to make an effort to introduce age-appropriate reproductive health education at different stages of adolescence.
- Implementing gender-focused and comprehensive sexual and reproductive health education in educational institutions are suggestive to reduce the confusing and conflicting information about relationship and sexuality among adolescents which may help them to maintain a positive relationship during adolescence, in marriage, within the family and also they can promote the same to their children.
- To ensure universal access to reproductive health education for adolescents the study would emphasize the need to create and support programs in the schools as well as the community that addresses specific health needs of adolescents. The study recommends that the Information, Education and Communication (IEC) programmes be elaborated keeping in mind the cultural issues.
- Efforts need to be made to enhance the capacity of teachers in delivering RH information in a friendly and non-judgmental manner.
- Family Life Education could be incorporated in the school curriculum to achieve safe reproductive health which focuses on learning about living, family and social relationships and personal development. Social workers have a major role in disseminating Family Life Education to school children.

- Educating and encouraging adolescents and parents regarding the nutritional requirements and to adapt diet appropriate for age. In addition to this, knowledge regarding the consumption of Iron-Folic Acid tablets needs to be provided.
- Implementation of mental health services at all levels of schools can greatly reduce psychological disorders and social misbehaviour at the early stage of life. Besides parents and teachers need to be educated to improve the quality of relationships with children to ensure a safe, secure and appropriate environment.
- The study would emphasize the need to appoint a counsellor in all schools who will look after the physical, psychological, social and emotional needs of adolescents and guide them to walk in a progressive direction. Counsellors are entitled to work in collaboration with teachers, students, parents and communities for the overall development of a child.
- Service providers can make a difference in the health status of adolescents. Thus, the medical officers and the health workers at all levels should be given exclusive training in handling adolescents. They need to develop a relationship of trust and confidence in adolescents to get accurate and detailed information related to their health problems. Social workers can provide the required training to service providers in handling the adolescents and in changing attitudes towards RH service seeking adolescents.
- Essential infrastructure facilities in schools such as separate toilets for girls, clean working toilets with running water, dustbin -inside the toilet, napkin incinerator, and ladies restroom made available to girl students.
- Appropriate training in menstrual hygiene management, usage of the toilet, napkin incinerator be provided to girl students and timely inspection by the concerned teacher need to be appreciated.
- The supply of sanitary napkins by the concerned authority should be made mandatory to all schools and the adequate distribution of these sanitary napkins to adolescent girls should be made.
- Online consultation and counselling can be made accessible to the students which provide a feeling of security and confidentiality for the adolescent population. Social workers can work with adolescents who need online consultation and counselling by providing required and adequate information and services.

- Introduction of abuse prevention skills at schools, colleges and in the community may reduce sexual abuse, early sex debut and unsafe sexual practice which may help the adolescents in building a safe secured environment to live in. School counsellors can organize such programmes to address the gender-based exploitation prevailing in society.

- The study explicit that the awareness regarding contraceptives usage and also knowledge about HIV/AIDS and STD are very limited among adolescent girls which need to be increased. This, in turn, prevents unwanted pregnancy, AIDS/STIs and its complications. Social workers can mobilize the media including local and folk media, radio stations and print media to disseminate information on these issues to reach the target group.

- The present study result has highlighted that the majority of adolescent girls have not availed of RH services due to a lack of awareness regarding it. Thus, awareness about AFHCs, its functions and availability need to be built strongly among adolescents, their parents and in the community.
- AFHS should come under one roof to avoid duplication of services and to avoid unnecessary resources. Such AFHSs should be made accessible, assure confidentiality, appropriate and specific for the locality, with well-trained health workers with a diplomatic approach and at a convenient location. Social workers can make the proper arrangement to ensure that all the services are relevant to adolescents' needs.
- All PHCs has to be well equipped to deliver AFHS if required beyond existing days and time restriction and a separate sophisticated wing to treat adolescent at secondary and tertiary care level can be established.
- School teachers and parents need to be made aware of the services provided under the various programmes meant for adolescents so that they may encourage their wards and pupils in the utilization of services.

- Promotion of contraceptives, problems of unsafe abortion and teenage pregnancies through mass media with appropriate messages (similar to 'alcohol and smoking are injurious to health') will have a positive impact on adolescent girls, boys and their parents.

- The study also suggests that Social Work services such as curative, correctional, rehabilitative, preventive and developmental services can be provided to students and Social Work knowledge base can be practised by teachers at individual, group and community levels for enhancing the knowledge and attitude of students and parents on RH education.
- School social work is an inevitable practice that creates a safe, orderly, warm and inviting school environment by providing services to students to enhance their well-being and improve their academic performance. School social workers are an integral link between students, parents, school staff and the community in helping students to achieve academic and societal success.

3. Relevance to Social Work practice

This research will help in raising the sensitization among social workers about the RH needs and services and also highlights the different challenges encountered by adolescents in obtaining information as well as in getting services of reproductive health which need to be addressed during the social work practice. The primary methods of Social Work such as social case work, social group work and community organization can be used to work with adolescent girls with regard to identification and problem solving for adolescent problems. The study findings can be used by the Social Work practitioners to develop the Information, Education and Communication (IEC) materials to impart knowledge on RH among adolescent girls.

As adolescent health is a crucial area of concern, a supportive environment both at home, communities as well as at school and other educational institutions is essential to have access to quality health education including sexual and reproductive health. The study emphasizes universal access to reproductive health education for adolescents, the need to create and support programs in the schools as well as the community, also the need to implement programs and services such as age-appropriate RH education through schools, Family Life Education which address the general and specific needs of adolescents. These programmes can be delivered to the beneficiaries by the professional workers by making use of appropriate methods in different fields of social work.

The present study would emphasize the need to strengthen school social work which would assist the adolescents to make informed and responsible decisions regarding their health, especially regarding their RH. Further, the study will also highlight the need

to make the existing school health service more sensitive to the needs of adolescents. The present study will help in promoting health-related research with specific reference to the reproductive health of adolescents.

The study also helps to draw implications for social workers, NGOs and practitioners working in the field of adolescents and policymakers to frame new policies and implement existing policies in a newer perspective and also to develop a comprehensive health package and intervention programmes in the promotion of adolescent health. Findings of the study can also be used as evidence to formulate the RH policy for adolescents of the country and also stress the need to consider the adolescent group as major stakeholders in formulating and implementation of policy and programmes.

4. Implications to future research

Promoting the health and well-being of young people especially the health of adolescents is the need of the hour. Implementing this into reality requires, social, cultural, economic and other context-based research about adolescents. Further study findings showed that there are unmet RH needs among adolescent girls and also a lack of utilization of adolescent-friendly health services by adolescent girls. In this regard, the researcher would suggest more comprehensive studies including mothers, teachers and service providers need to be done to identify the attitude of significant people which may bring positive impact in making the relevant policies and programmes and strategies which will enhance the adolescent's knowledge, perception and promotion of adolescent health. Evaluative programmes of RH services to identify the strength and weaknesses of the programmes and also to enhance the knowledge of relevant stakeholders in making need-based RH programmes and services apparent to adolescents. Social work research in the context of promoting reproductive health education, facilitating reproductive health needs among adolescents and identifying the barriers in the utilization of adolescent services are suitable to enhance the knowledge and attitude of significant people which definitely may bring a positive impact on adolescent's life. Further, the researcher would suggest carrying out a study to understand the whole aspects which influence RH needs and service utilization among the adolescents in the Dakshina Kannada district.

5. Conclusion

In the present study, the researcher has explored various reproductive health needs among adolescent girls such as initiation of age-appropriate RH education, need of a counsellor in schools, open communication with parents about RH matters and the need for additional RH services such as a lady doctor at every hospital for comfortable services, adolescent-friendly Sneha clinics in their vicinity, supply of sanitary napkins to all types of schools. The study further also found out that these needs were poorly addressed in the Dakshina Kannada district. Study analysis shows that age ($p=.000<0.01$), class ($p=.000<0.01$), mother's education ($p=.000<0.01$) and accessibility to number of mass media ($p=.012<0.05$) have shown significant association with RH knowledge and ordinal position ($p=.000<0.05$), mother's education ($p=.000<0.01$) and economic status ($p=.000<0.01$) have shown significant association with awareness and utilization of RH services.

The major results discovered in this study unveil a moderate level of RH knowledge, poor RH practices and poor level of awareness and utilization of RH services among the study participants. The study results confirm that those who had good RH knowledge were able to identify and recognize more RH needs than those who had low knowledge. The study also reported that as the awareness regarding RHS increases, the utilization of the same also increases. The present study also determines that awareness is a major hindrance in utilizing RH services among the participants.

The above findings recommend that the adolescent population need to be equipped with adequate knowledge about RH and through age-appropriate RH education at all schools which will develop an optimistic attitude to cope with the pubertal changes and adopt safe and healthy sexual and reproductive practices during adolescence which in turn helps them to develop a healthy attitude towards family life. The initiation of comprehensive and accessible RH services and the generation of awareness regarding ARSH services among adolescents is also a need of the hour to safeguard the health of adolescent girls.

Response to these RH needs by equipping them with knowledge, skills, values and support and providing opportunities for self-advancement in an equitable manner, can set the stage for their healthy development and growth to responsible adulthood making a positive contribution to society. Efforts are to be made to involve adolescents in decisions that affect and facilitate them with every opportunity for developing into successful adults and give them a chance to build a safe, happy, healthy and productive nation in the future.

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